



MISSOURI BOTANICAL GARDEN

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GEORGE ENGELMANN BOTANICAL NOTEBOOKS

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J. capitatus

367-9

116

TRANS. OF THE ACAD. OF SCIENCE.

IV. *Direction of Winds and number of Thunderstorms in '61 & '62.*

1861.	E.	N.	N.E.	S.W.	N.W.	S.	W.	S.E.	Prevailing Winds.	Thunder- storms.
January.....	11	3	12	22	38	18	28	61	S.E.	0
February ...	4	2	2	35	24	19	41	60	S.E.	2
March.....	12	11	10	23	30	19	42	40	W. & S.E.	3
April	16	10	9	26	21	35	34	26	S. & W.	2
May	26	10	23	21	8	13	49	35	W. & S.E.	5
June	12	21	22	20	25	26	8	41	S.E.	7
July	3	31	14	21	26	46	15	29	S.	3
August	18	24	58	17	11	18	3	37	N.E.	5
September...	6	14	18	26	30	13	21	52	S.E. & N.W.	3
October	12	9	5	21	30	33	46	S.E. & S.	1	
November...	7	15	8	22	27	20	36	44	S.E. & W.	1
December ...	9	19	9	25	23	33	17	51	S.E. & S.	0
	136	169	190	279	293	293	324	522	S.E.	32
1862.	E.	S.W.	N.	N.E.	W.	S.	N.W.	S.E.	Prevailing Winds.	Th. st's.
Jan.....	19	6	19	23	29	3	38	51	S.E.	1
Feb.....	14	9	18	16	22	7	39	43	S.E. & N.W.	0
March ...	9	14	3	15	59	10	34	43	W., S.E. & N.W.	4
April ...	12	13	18	31	18	11	34	47	S.E., N.W. & N.E.	6
May	12	18	14	38	18	30	14	44	S.E. & N.E.	5
June	3	29	24	16	8	36	26	23	S., S.W., N.W., N. & S.E.	6
July.....	5	25	17	7	2	24	31	77	S.E.	10



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Additional Remarks on Atmospheric Electricity.

By A. WISLIZENUS, M.D.

The delay in the publication of this volume enables me to add to my observations of atmospheric electricity in 1861, the result of my observations in 1862. The latter observations have been made in the same manner and by means of the same fine glass thread, which, after many thousand torsions, proves as good as ever. I present herewith in tabular form the general result of my observations in 1861 and 1862.

I. *Monthly mean of Positive Atmospheric Electricity in 1861 and 1862, at St. Louis, Mo., based upon daily observations at 6, 9, 12, and 9 o'clock, from morning till night.*

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I. capitatus

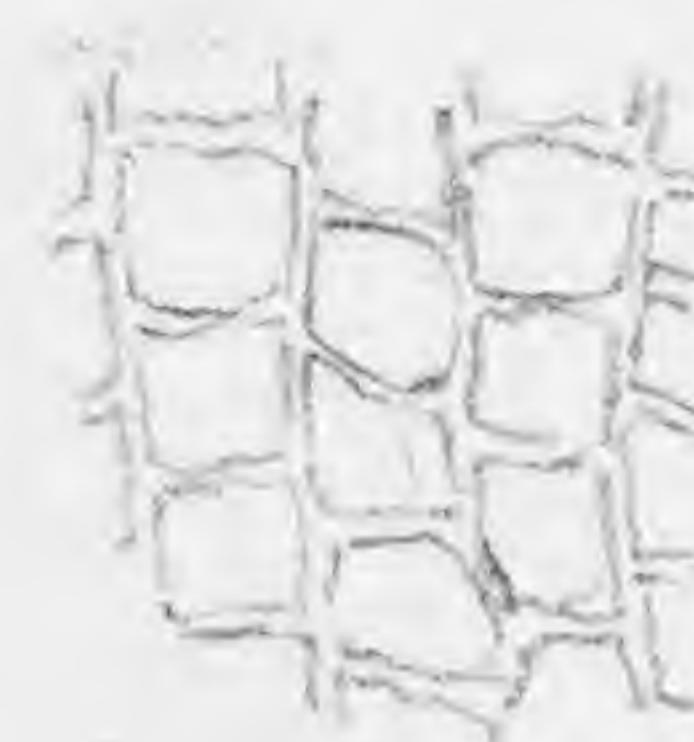
April 29 1866
May 25 ...

Frankwin, Adran

x60



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Cor. 4th & Olive Sts., St. Louis.

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1886



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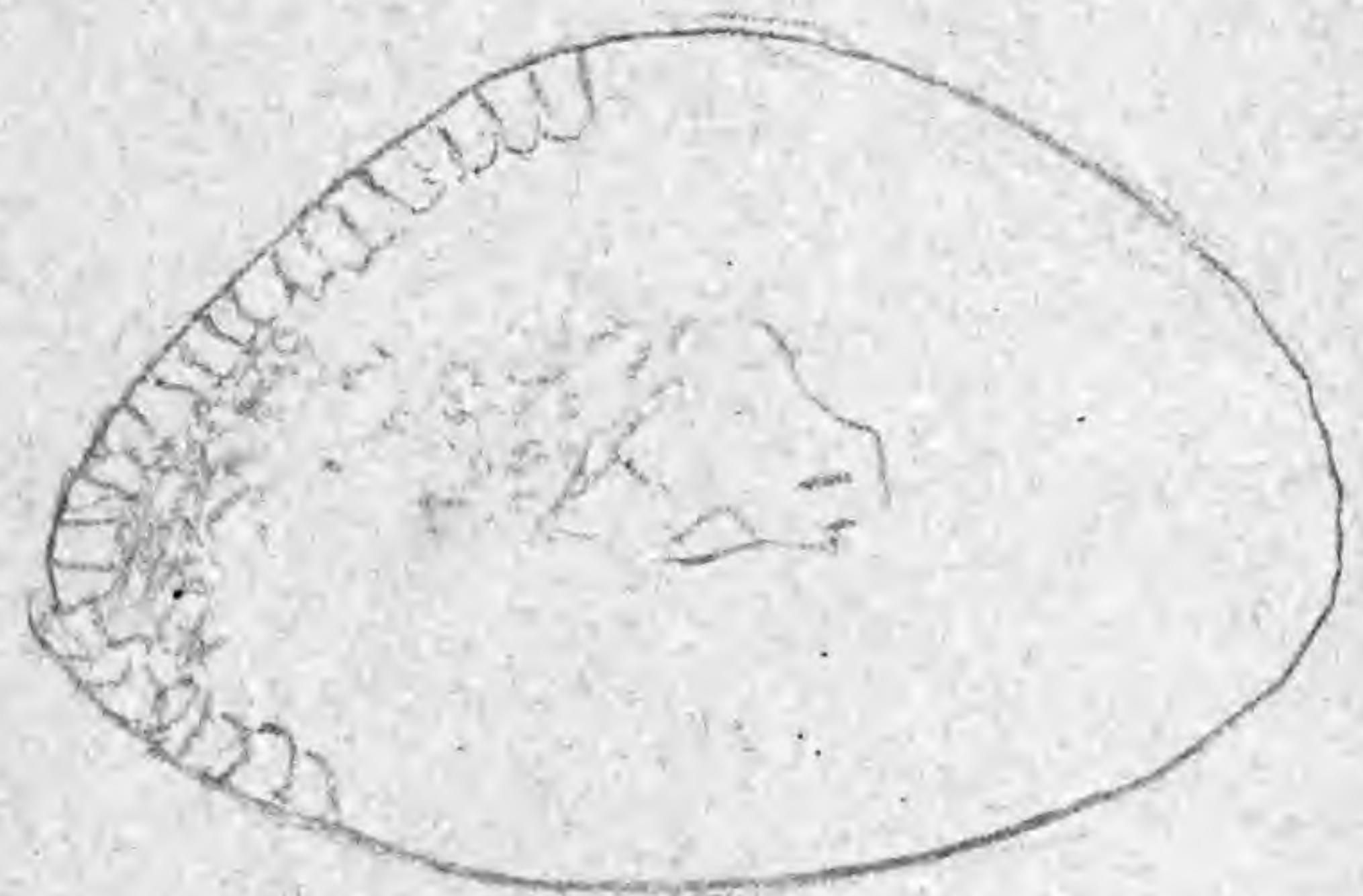
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I. capitatum

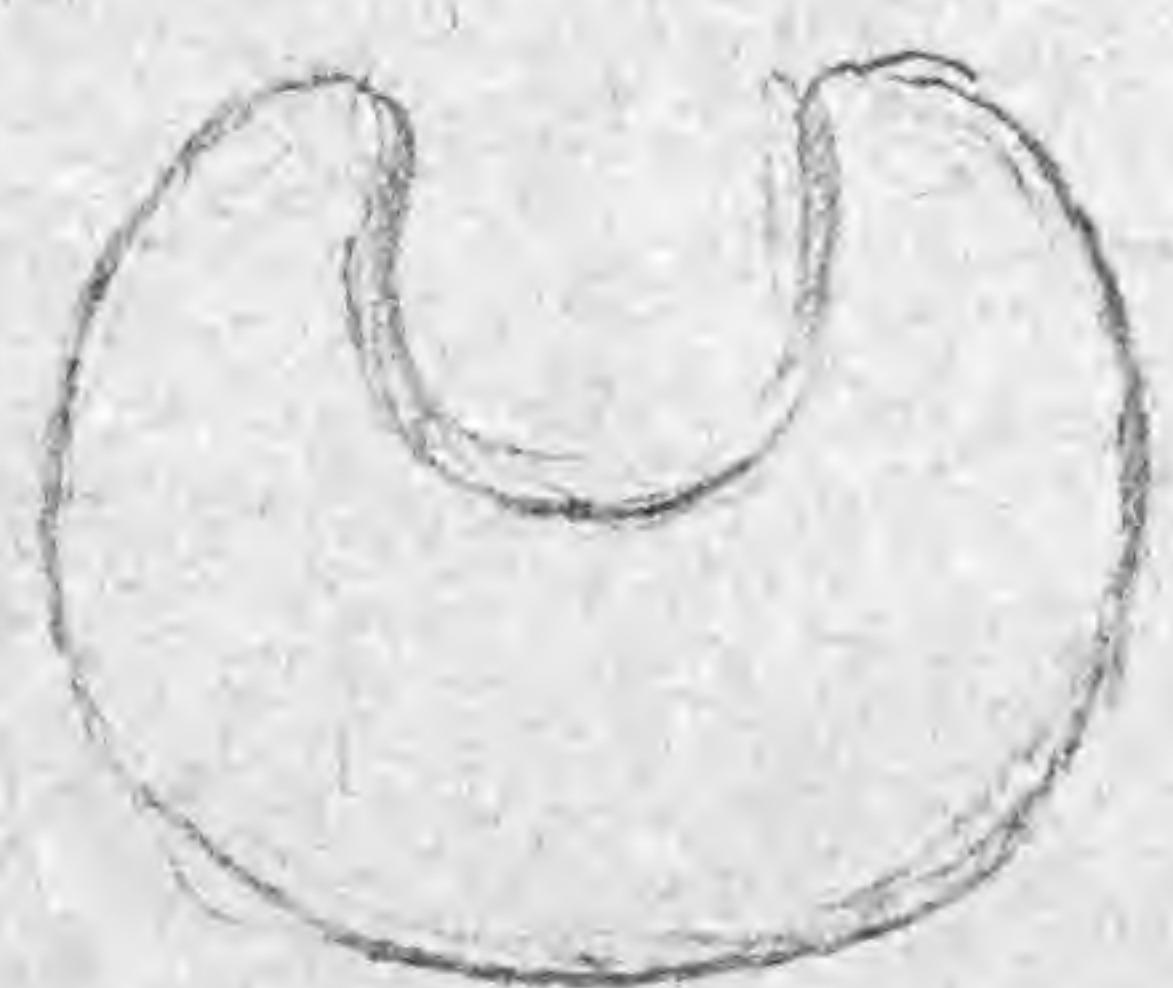
May 25 1866

St. Louis, Missouri

Sect. of stem x60



sect of
upper



lower part of leaf

x60



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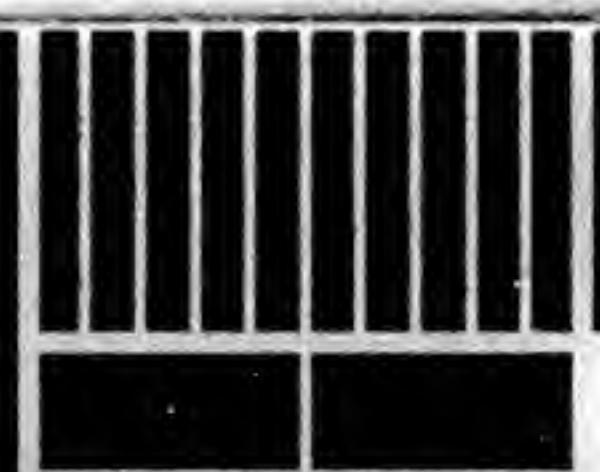
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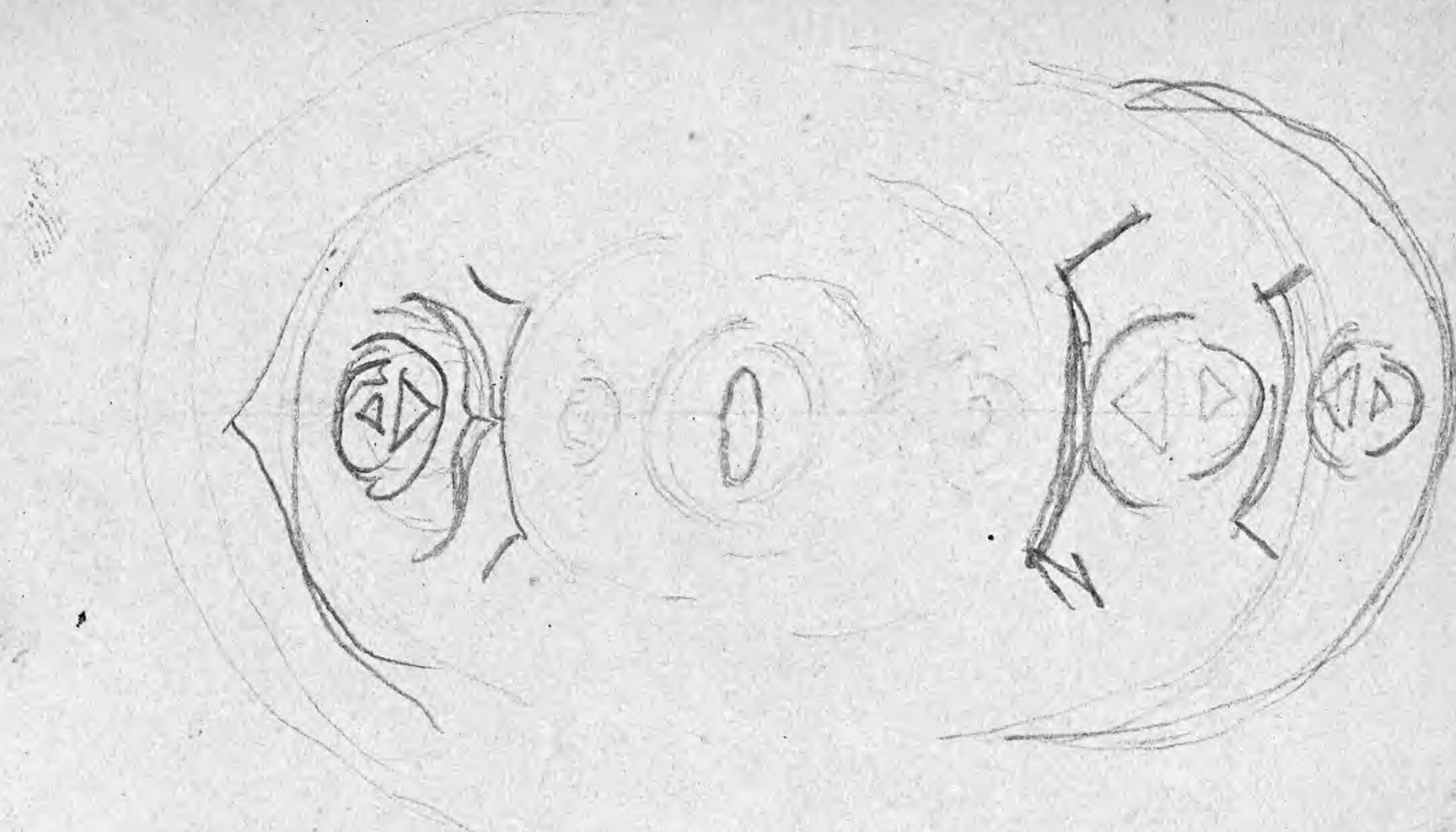
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I. capitatus

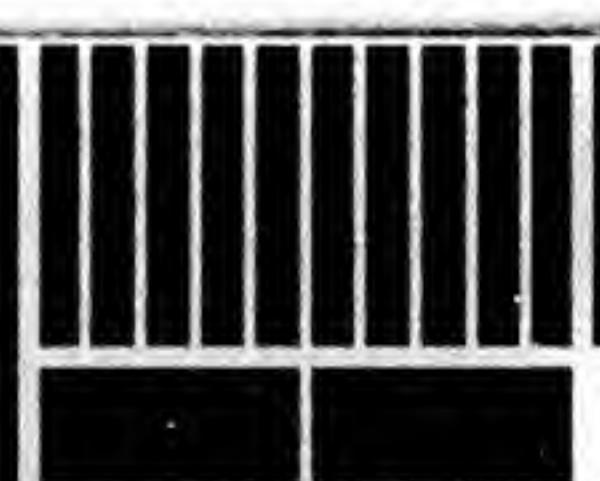



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	Jan.	Feb.	Mar.	Ap ^l	May.	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Year.
1861...	32.2	40.4	44.8	58.1	64.1	76.9	77.5	78.6	69.1	57.9	46.0	39.7	57.1° F.
1862...	28.9	30.2	43.2	55.0	69.7	75.1	81.2	80.7	72.1	57.3	42.6	41.3	56.4° F.

RELATIVE HUMIDITY.

	Jan.	Feb.	Mar.	Ap ^l	May.	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Mean of Year.
1861...	72.2	63.3	64.5	61.5	66.3	70.8	66.3	69.6	77.3	76.6	69.0	74.3	69.5
1862...	85.3	73.9	70.8	67.0	57.3	67.0	66.8	64.3	74.2	67.2	69.5	74.6	69.8

III. Yearly mean of Positive Electricity of Temperature, and of Relative Humidity of the Atmosphere, at the hours of 6, 9, 12, 3, 6 and 9, from morning till night, based upon daily observations at these hours through the years 1861 and 1862, at St. Louis, Mo.

ELECTRICITY.

	At 6 A.M.	At 9 A.M.	At 12 M.	At 3 P.M.	At 6 P.M.	At 9 P.M.
1861	8.6	10.0	9.2	7.9	8.7	6.9
1862	8.9	10.0	9.1	7.3	8.1	6.8

TEMPERATURE.

	1861	1862	1861	1862	1861	1862
	48.9° F.	48.9° F.	54.9	55.0	61.6	60.9

	63.6	62.3	59.3	58.0

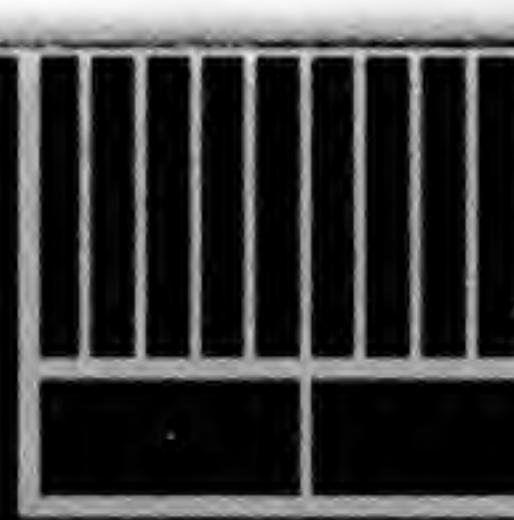
	54.3	53.6	54.3	53.6

RELATIVE HUMIDITY.

	1861	1862	1861	1862	1861	1862
	86.4	85.3	71.3	70.6	60.3	60.0

	57.2	57.5	65.1	67.6	77.3	78.0

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A black and white photograph of a long, ornate metal chain. The chain is coiled and features several large, circular links. Engraved on these links are the words "GEORGE ENGLISH LONDON" and "PAUL'S CHAIN". The chain is set against a light, textured background.

	1861.	1862.	1861.	1862.	1861.	1862.
Jan....	179	179	3	5	40°	40°
Feb....	162	166	6	2	34	33
March...	168	179	15	8	30	48
April...	157	157	12	22	33	52
May...	171	180	17	5	32	32
June...	162	143	5	2	25	25
July....	183	153	3	1	13	13
August..	176	143	1	1	1	1
Sept...	169	117	8	1	18	18
Oct...	162	143	20	1	16	16
Nov...	172	157	40	1	21	21
Dec...	175	166	5	0	14	14
	2046	1883	78	67	20	20
	59	225	420	520	40°	40°



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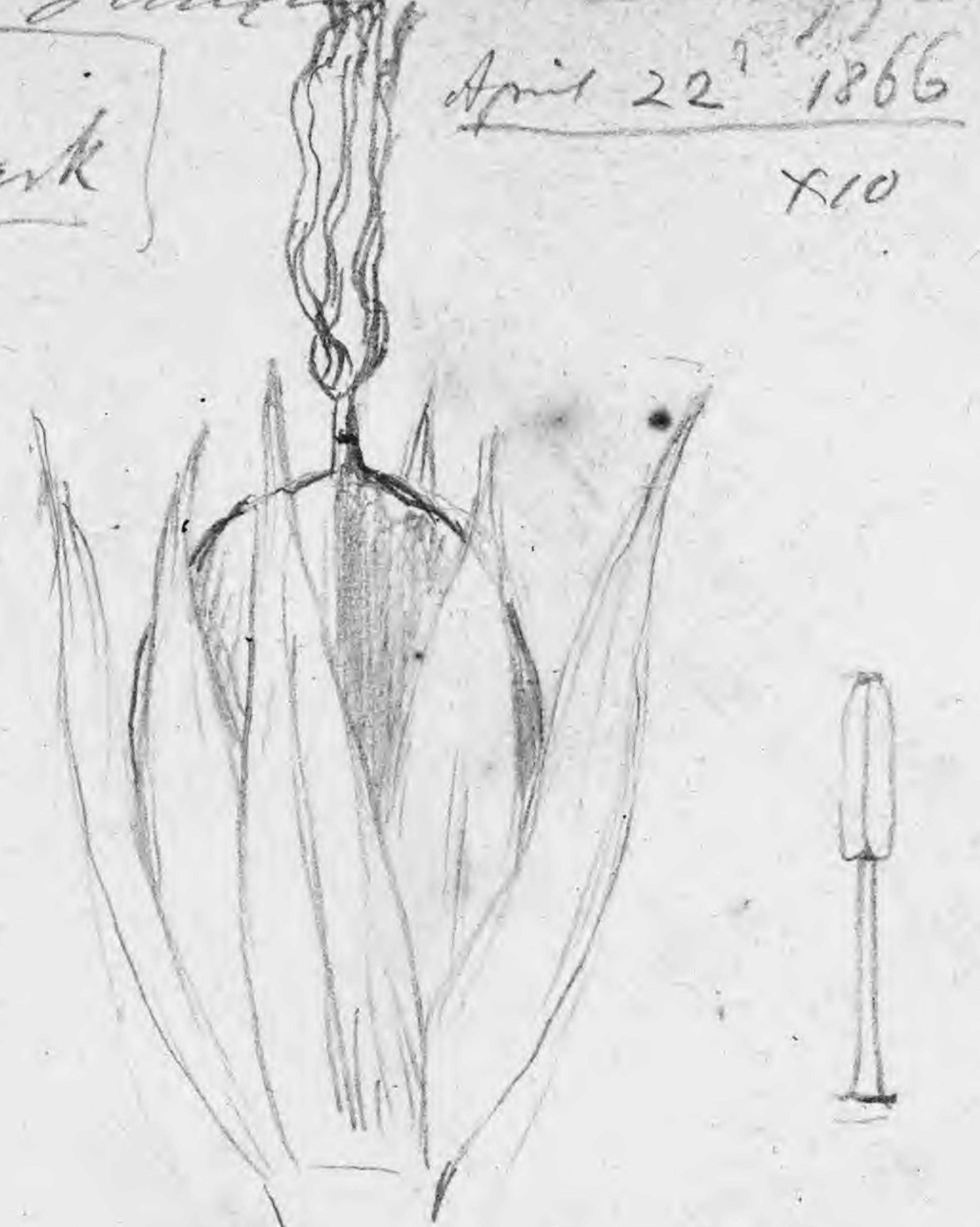
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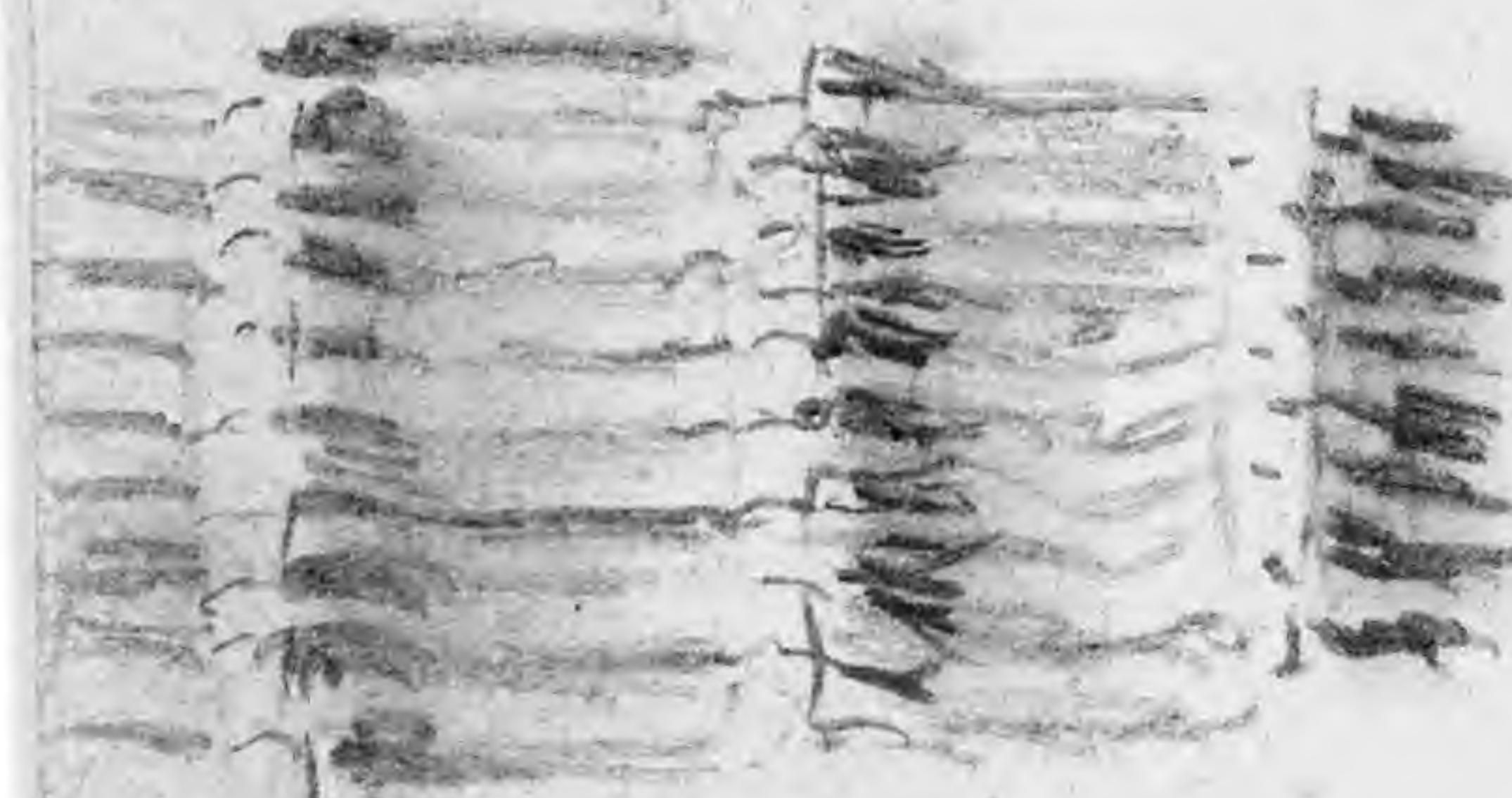
MISSOURI BOTANICAL GARDEN

Turk St
W. Border of Park

x60



x10



x150

capsula membranacea
temmickiana pallida
sepula *temmickiana membranacea*
modis herbacea

Seed of leaf
usual size
x10
broads
Leaf seen
leaves $\frac{1}{2}$ -1
mm wide



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9341

ALEX. LEITCH,
APOTHECARY & PHARMACEUTIST

Marble Building Cor. Fourth & Olive Sts. St. Louis, Mo.

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS



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In Spengler's Rees in H.
Zeyher

	Jan.	Feb.	Mar.	Ap'l.	May.	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Mean of Year.
1861...	32.2	40.4	44.8	58.1	64.1	76.9	77.5	78.6	69.1	57.9	46.0	39.7	57.1° F.
1862...	28.9	30.2	43.2	55.0	69.7	75.1	81.2	80.7	72.1	57.3	42.6	41.3	56.4° F.

TEMPERATURE.

	Jan.	Feb.	Mar.	Ap'l.	May.	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Mean of Year.
1861...	72.2	63.3	64.5	61.5	66.3	70.8	66.3	69.6	77.3	76.6	69.0	74.3	69.5
1862...	85.3	73.9	70.8	67.0	57.3	67.0	66.8	64.3	74.2	67.2	69.5	74.6	69.8

RELATIVE HUMIDITY.

	Jan.	Feb.	Mar.	Ap'l.	May.	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Mean of Year.
1861...	4.8	5.1	5.5	6.1	6.5	7.5	8.1	8.5	8.8	8.5	8.0	7.5	7.1° F.
1862...	5.2	5.5	5.8	6.2	6.6	7.2	7.8	8.2	8.5	8.2	7.7	7.2	6.8° F.

III. Yearly mean of Positive Electricity of Temperature, and of Relative Humidity of the Atmosphere, at the hours of 6, 9, 12, 3, 6 and 9, from morning till night, based upon daily observations at these hours through the years 1861 and 1862, at St. Louis, Mo.

ELECTRICITY.

	At 6 A.M.	At 9 A.M.	At 12 M.	At 3 P.M.	At 6 P.M.	At 9 P.M.
1861	8.6	10.0	9.2	7.9	8.7	6.9
1862	8.9	10.0	9.1	7.3	8.1	6.8

TEMPERATURE.

1861	48.9° F...	54.9	61.6	63.6	59.3	54.3
1862	48.9	55.0	60.9	62.3	58.0	53.6

RELATIVE HUMIDITY.

1861	86.4	71.3	60.3	57.2	65.1	77.3
1862	85.3	70.6	60.0	57.5	67.6	78.0

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V. Positive or Negative.

	Positive Electricity.		Negative Electricity.		No Electricity, or 0.		Highest Positive Electricity.	
	1861.	1862.	1861.	1862.	1861.	1862.	1861.	1862.
Jan.....	179	179	3	5		2	40°	40°
Feb.....	162	166	6	2		34	33	
March ...	168	179	15	8		30	48	
April ...	157	157	12	22	1	33	52	
May ...	171	180	17	5	1	25	32	
June ...	162	143	5	2	8	16	21	
July....	183	153	3	8	1	20	14	
August ..	176	143	5	4	1	24	11	
Sept....	169	117	1	1	10	14	19	
Oct.....	162	143	4	1	6	15	18	
Nov....	172	157	2	7	20	61	23	
Dec....	175	166	5	0	6	17	33	
	2046	1883	78	67	59.	225	42°	52°



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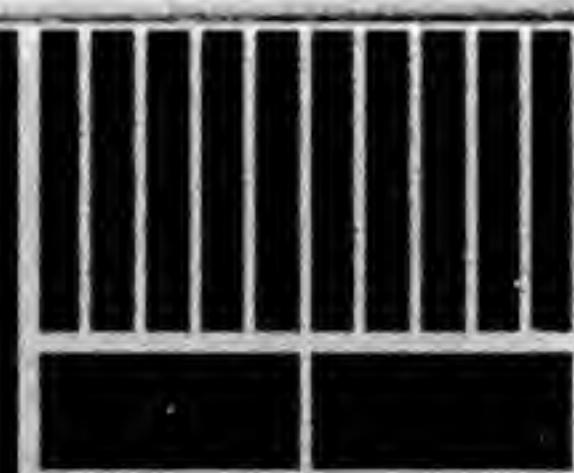
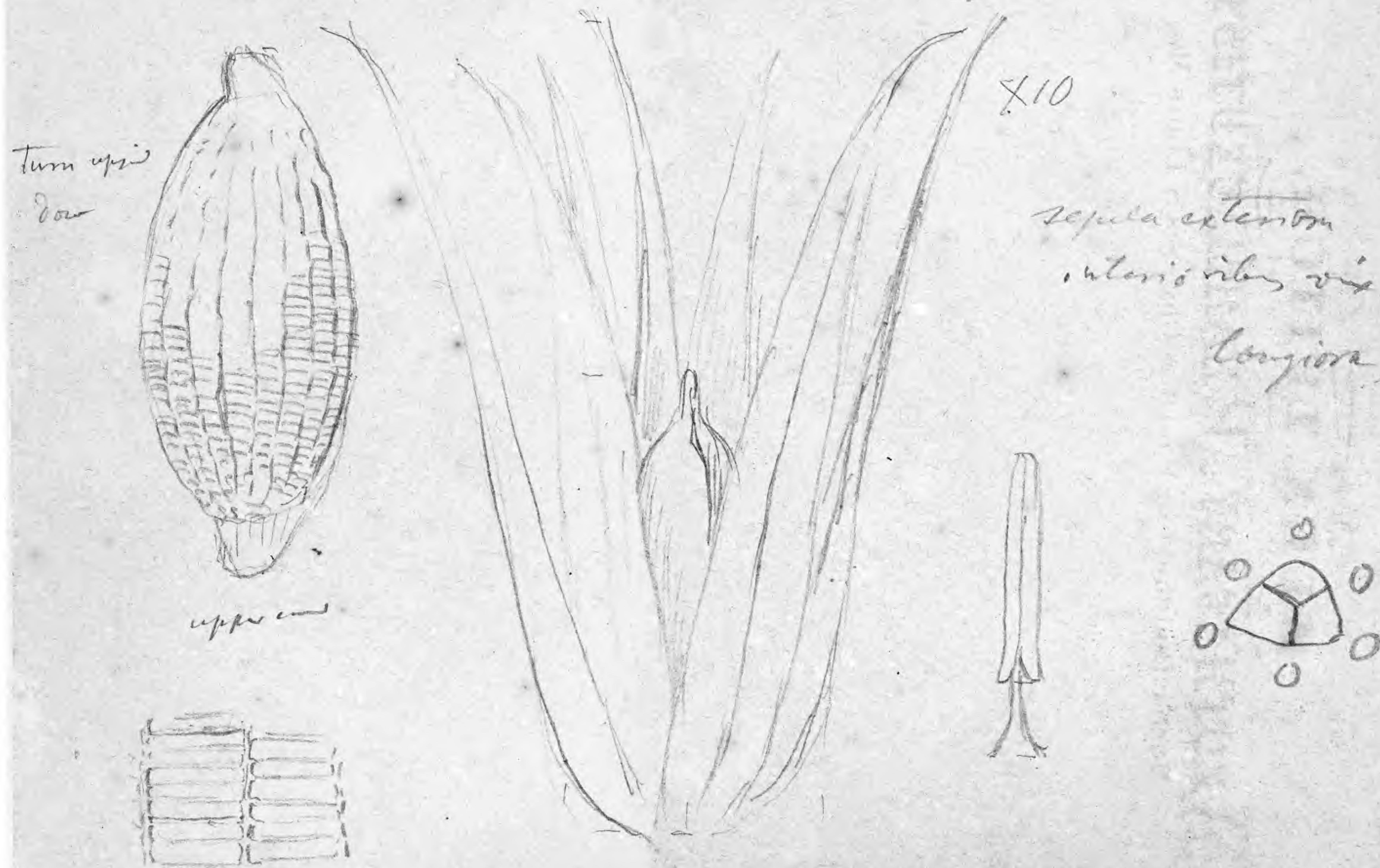
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Immsi Spengeli Nees Sept 28 1865 —

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